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United States
Department of
Agriculture

Forest
Service

Forest
Pest
Management

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Reply To: 3410

Date: January 27, 1997

Subject: Douglas-fir Tussock Moth Pheromone Detection Survey
1996 Report (NE97-2)

To: Forest Supervisors: Eldorado, Inyo, Lassen, Plumas, Modoc, Sierra, Stanislaus, Sequoia and Tahoe National Forests and the Lake Tahoe Basin Management Unit

Enclosed are the results of the 1996 cooperative Douglas-fir tussock moth (DFTM) pheromone detection survey. Average trap catches for 1996 showed increases for several plots compared to 1995 catches (Table 1.). Data were collected for 149 plots (5 traps/plot) during 1996. Of these, 75 plots (50%) had fewer than an average of 25 males per trap, the remaining plots averaged 25 or more moths per trap. For some plots this is a continued upward trend which began in 1993. Plots which averaged >25 moths per trap were located on the following Ranger Districts: Calaveras, Miwok, and Summit on the Stanislaus NF, Georgetown, Pacific, Placerville and Amador on the Eldorado NF, Downieville, Nevada City and Foresthill on the Tahoe NF, Mt. Hough, Plumas NF and Eagle Lake and Almanor on the Lassen NF. In addition to these plots monitored on National Forest lands there were 6 plots monitored by the California Department of Forestry that averaged >25 moths per trap. Five of these were on state land in the vicinity of the Stanislaus and Eldorado NF's and one was the Dry Creek Rim plot near the Modoc NF.

Increases in trap counts similar to these have been detected in the past in California (1984-1987, Table 1.), but the populations declined before reaching outbreak levels in the areas being monitored. Prior to the 1987-1989 outbreak on the Lassen and Plumas NF's, population increases were detected in several of the monitoring areas but the outbreak occurred in areas that were not being monitored. Based on the uncertainty in predicting when and where a population is going to reach outbreak levels it is prudent that field going personnel monitor for evidence of feeding and defoliation on white fir throughout the susceptible host type this summer and fall. In addition, Forest Pest Management will continue monitoring of other life stages and adult males in established monitoring sites. Ranger Districts might want to consider establishing additional pheromone plots in areas of susceptible host type.

Sufficient trapping materials have been ordered for the detection trapping plots for 1997. They will be distributed to cooperators in June or July of this year. Please direct any questions and/or observations of feeding or defoliation to Sheri Smith (916-257-2151) or John Wenz at (209-532-3671).

Updates on population monitoring will be distributed to land managers as needed.



Sheri Lee Smith
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NE CA Shared Service Area

Enclosure

cc: Jesse Rios, CDF&FP, Sacramento
Don Owen, CDF&FP, Redding
Dan Marlatt, BLM, Susanville
Acting Entomology Group Leader, RO-S&PF/FPM
FPM - Shasta-Trinity NF
FPM - Stanislaus NF
FPM - Lassen NF

Table 1.

NUMBER OF DOUGLAS-FIR TUSSOCK MOTH PHEROMONE
DETECTION SURVEY PLOTS BY TRAP CATCH 1979-1996

Year	Total Number Plots	NUMBER OF PLOTS WITH AN AVERAGE MOTH CATCH PER TRAP OF:													
		0<10	10<20	20<25	25<30	30<35	35<40	40<45	45<50	50<55	55<60	60<65	65<70	70<75	75+
1979	102	97	2	1	1	0	1	0	0	0	0	0	0	0	0
	100%	95%	2%	1%	1%		1%								
1980	99	99	0	0	0	0	0	0	0	0	0	0	0	0	0
	100%	100%													
1981	93	78	10	4	1	0	0	0	0	0	0	0	0	0	0
	100%	84%	10%	4%	2%										
1982	95	93	1	0	1	0	0	0	0	0	0	0	0	0	0
	100%	98%	1%		1%										
1983	98	87	6	1	1	3	0	0	0	0	0	0	0	0	0
	100%	89%	6%	1%	1%	3%									
1984	111	51	18	11	5	7	8	4	3	4	0	0	0	0	0
	100%	46%	16%	10%	4%	6%	7%	4%	3%	4%					
1985	105	58	14	4	7	6	5	1	2	4	1	2	0	1	0
	100%	55%	13%	4%	6%	6%	5%	1%	2%	4%	1%	2%		1%	
1986	107	64	16	4	8	6	1	3	0	1	0	1	1	1	1
	100%	60%	15%	3%	7%	6%	1%	3%		1%		1%	1%	1%	1%
1987	108	80	15	4	2	1	1	3	0	1	0	0	1	0	0
	100%	74%	14%	4%	2%	1%	1%	2%		1%			1%		
1988	124	106	9	3	3	0	2	1	0	0	0	0	0	0	0
	100%	86%	7%	2%	2%		2%	1%							
1989	130	129	1	0	0	0	0	0	0	0	0	0	0	0	0
	100%	99%	1%												
1990	138	135	1	0	1	1	0	0	0	0	0	0	0	0	0
	100%	97%	1%		1%	1%									
1991	143	135	4	1	0	0	2	1	0	0	0	0	0	0	0
	100%	94%	3%	1%			1%	1%							
1992	164	156	3	0	2	1	0	0	0	0	1	0	1	0	0
	100%	95%	1%		1%	1%				1%		1%			
1993	143	135	8	0	0	0	0	0	0	0	0	0	0	0	0
	100%	94%	6%												
1994	151	139	11	1	0	0	0	0	0	0	0	0	0	0	0
	100%	92%	7%	1%											
1995	158	77	35	13	16	7	7	3	0	0	0	0	0	0	0
	100%	49%	22%	8%	10%	4.5%	4.5%	2%							
1996	149	33	26	16	8	7	12	9	5	8	6	8	5	1	5
	100%	22%	17%	11%	6%	4%	8%	6%	3%	6%	4%	6%	3%	1%	3%